

## **REMARKS**

In the Office Action the Examiner noted that claims 1-8, 10, 12, 14, 16, 18 and 20-31 were pending in the application and the Examiner rejected all claims. By this amendment various claims have been amended. Thus, claims 1-8, 10, 12, 14, 16, 18 and 20-31 are pending in the application. The Examiner's rejections are traversed below.

### **Rejection of Claims 10, 16, 20, 24 and 28**

In items 3-9 of the Office Action the Examiner rejects claims 10, 16, 20, 24 and 28 under 35 U.S.C. 103 as unpatentable over U.S. Publication 2003/0204618 to Foster et al., International Publication WO99/14931 to Dalton et al. and U.S. Patent 6,594,704 to Birenback et al. In addition, despite the fact that it is not mentioned in item 3 of the Office Action it appears that this portion also includes claim 32. However, claim 32 has been cancelled.

#### **Claim 10 as Amended**

Claim 10 has been amended to recite that the packet forwarder checks a destination address of the packet received from a network interface of the packet forwarder, transmits to the packet control device the packet if the destination address is an address of the packet forwarder itself, and forwards the packet based on the first routing table if the destination address is not the address of the packet forwarder. This feature is not taught or suggested by the relied upon art.

#### **The Relied Upon Art**

The Foster et al. reference describes a method, a system and a computer readable medium for processing received data communications that are routed through a network by using virtual identifiers which can each be assigned to one or more paths through a network to a destination, such as by a network manager for the network (see abstract).

The Dalton reference is directed to a centralized routing engine that is able to assist gate-ways in make routing decisions for calls being places in an IP network environment (see abstract).

The Birenback reference is directed to a method of maintaining multiple routing tables. The method includes providing the router with a route table generator to maintain a global table, and a forwarding engine to perform table lookups. The performing of table lookups occurs in one of the multiple routing tables of the global table using a key which represents an index into the one of the multiple routing tables within the global table (see abstract) .

**Claim 10 patentably Distinguishes Over the Relied Upon Art**

Referring to Figs. 2A-2C of Foster which are relied upon by the Examiner in the rejection, these Figures illustrate embodiments using virtual identifiers to inter-communicate through an example fiber channel fabric network (see paragraph [0030]). Figure 2A essentially illustrates a packet forwarder including a plurality of network interfaces. Foster does not teach or suggest the method of claim 10 which includes:

the packet forwarder checks a destination address of the packet received from the network interface of the packet forwarder, transmits to the packet control device the packet if the destination address is an address of the packet forwarder itself, and forwards the packet based on the first routing table if the destination address is not the address of the packet forwarder, and

Dalton discloses a centralized routing engine that is able to assist gateways in making routing decisions for calls being placed in an IP network environment. At page 22, lines 1-23 Dalton states:

...The routing engine 110 processes the request and returns a response to an authentication server 602 at step 704. Routing engines 110 also accept detail reports from authentication servers 602. ...

...Once a routing engine 110 returns route information, the authentication server 602 adds authorization information to the response before returning it to the requesting device (gateway) ... .

Thus, Dalton merely discloses an authentication process performed between a client and a server and Dalton fails to teach or suggest the above-quoted features of claim 10.

Birenback et al. is directed to a method of managing and using multiple virtual private networks in a router with a single routing table. At column 5, lines 3-7, Birenback states:

The RTG 40 adds entries to routing tables corresponding to particular virtual routers, each of which is hashed. The present invention combines the address prefix with VPN ID, which yields the hashed location within the combined table, for the specific table entry.

Thus, Birenback merely discloses how a route table generator (RTG 40) maintains a single routing table (42). Birenback does not teach or suggest the above-quoted features of claim 10.

In summary, it is submitted that none of the relied upon art, either taken alone or in combination, teaches or suggests the method of claim 10 which includes:

the packet forwarder checks a destination address of the packet received from the network interface of the packet forwarder, transmits to the packet control device the packet if the destination

address is an address of the packet forwarder itself, and forwards the packet based on the first routing table if the destination address is not the address of the packet forwarder, and

Therefore, it is submitted that claim 10 patentably distinguishes over the relied upon art.

#### **Claim 16**

Claim 16 is directed to a computer readable storage for controlling a computer to perform:

the packet forwarder checks a destination address of the packet received from the network interface of the packet forwarder, transmits to the packet control device the packet if the destination address is an address of the packet forwarder itself, and forwards the packet based on the first routing table if the destination address is not the address of the packet forwarder, and

Therefore, it is submitted that claim 16 patentably distinguishes over the relied upon art.

#### **Claim 20**

Claim 20 is directed to a router control device in which:

the forwarder checks a destination address of the packet received from the network interface of the forwarder, transmits to the router control device the packet if the destination address is an address of the forwarder itself, and forwards the packet based on the second routing table if the destination address is not the address of the forwarder, and

Therefore, it is submitted that claim 20 patentably distinguishes over the relied upon art.

#### **Claim 24**

Claim 24 is directed to a method of maintaining a routing table in which:

the forwarder checks a destination address of the packet received from the network interface of the forwarder, transmits to the router control device the packet if the destination address is an address of the forwarder itself, and forward the packet based on the second routing table if the destination address is not the address of the forwarder, and

Therefore, it is submitted that claim 24 patentably distinguishes over the relied upon art.

#### **Claim 28**

Claim 28 is directed to a computer readable storage for controlling a computer to perform:

the forwarder checks a destination address of the packet received from the network interface of the forwarder, transmits to the router

control device the packet if the destination address is an address of the forwarder itself, and forwards the packet based on the second routing table if the destination address is not the address of the forwarder, and

Therefore, it is submitted that claim 28 patentably distinguishes over the relied upon art.

**Rejection of Claims 1-8, 12, 14 and 18 under 35 U.S.C. 103**

In items 10-21 on pages 20-52 of the Office Action the Examiner has rejected claims 1-8, 12, 14 and 18 under 35 U.S.C. 103 as unpatentable over Foster, Dalton, Birenback and U.S. Patent 6,496,935 to Fink et al.

**Claim 1 as Amended**

Claim 1 as amended is directed to a packet control system which includes a packet forwarder and a packet control device. As amended, the packet control device includes a received packet transfer unit that checks a destination address of the packet received from a network interface, transmits to the packet control device the packet received from the network interface if the destination address is an address of the packet forwarder itself, and forwards the packet based on the first routing table if the destination address is not the address of the packet.

**Claim 1 Patentably Distinguishes Over the Relied Upon Art**

The above-described features of amended claim 1 are not taught or suggested by Foster, Dalton or Birenback.

The Fink et al. reference is directed to a system, a device, and a method for accelerating packet filtration by supplementing a firewall with a pre-filtering module (see abstract). As illustrated in Fig. 1, Fink discusses a packet forwarder that transfers a packet receipt from the network interface to another network interface and does not discuss features relating to a received packet transfer unit that checks a destination address of the packet received from a network interface, transmits to the packet control device the packet received from the network interface if the destination address is an address of the packet forwarder itself, and forwards the packet based on the first routing table if the destination is not the address of the packet forwarder.

In summary, it is submitted that none of the relied upon art teaches or suggests the packet control system of claim 1 which includes:

a received packet transfer unit that checks a destination address of the packet received from a network interface, transmits to the packet control device the packet received from the network

interface if the destination address is an address of the packet forwarder itself, and forwards the packet based on the first routing table if the destination address is not the address of the packet forwarder, and wherein

Therefore, it is submitted that claim 1 patentably distinguishes over the relied upon art.

**Claims 2, 4, 8, 12, 14 and 18**

Claims 2, 4, 8, 12, 14 and 18 are independent claims, each of which recite:

the packet forwarder checks a destination address of the packet received from the network interface of the packet forwarder, transmits to the packet control device the packet if the destination address is an address of the packet forwarder itself, and forwards the packet based on the first routing table if the destination address is not the address of the packet forwarder, and

Therefore, it is submitted that claims 2, 4, 8, 12, 14 and 18 patentably distinguish over the relied upon art.

**Claims 3, 5 and 7**

Claims 3, 5 and 7 depend from one of the above-identified independent claims and include all the features of the claim from which they depend plus additional features which are not taught or suggested by the relied upon art. Therefore, it is submitted that claims 3, 5 and 7 patentably distinguish over the relied upon art.

**Claim 6**

Claim 6 is directed to packet forwarder which includes:

a received packet transfer unit that checks a destination address of the packet received at the network interface, transmits the packet to the packet control device if the destination address is an address of the packet forwarding device itself, and forwards the packet based on the first routing table if the destination address is not the address of the packet forwarding device, the packet control device including a virtual interface having address information associated with the network interface, the packet control device maintaining the first routing table of the packet forwarder using a routing process that generates the first routing table based on routing information on the packet received at the network interface, and the packet control device connecting to the packet forwarder through a network;

Therefore, it is submitted that claim 6 patentably distinguishes over the relied upon art.

**Rejection of Claims 21-23, 25-27 and 29-31 under 35 U.S.C. 103**

On pages 52-70 of the Office Action the Examiner rejected claims 21-23, 25-27 and 29-31 under 35 U.S.C. 103 as unpatentable over Foster, Dalton, Birenback, and U.S. Patent 6,272,522 to Lin et al.

**Claim 23 as Amended**

Claim 23 as amended is directed to a router control system which includes a forwarder which checks a destination address of the packet from its network interface, being associated with an address of the virtual interface, the forwarder transmitting to the router control device the packet if the destination address is an address of the forwarder itself, the forwarder forwarding the packet to its other network interface according to the first routing table, and the forwarder including a received packet transfer unit that transmits a routing information packet received at the network interface to the router control device that maintains the first routing table using a routing process.

**Claim 23 as Amended Patentably Distinguishes Over the Relied Upon Art**

The above features of the forwarder are not taught or suggest by Foster, Dalton and Birenback.

The Lin reference discusses a data packet switching and server load balancing device which is provided by a general purpose multiprocessor computer system. In particular, Lin discusses:

A data packet switching and server load balancing device is provided by a general-purpose multiprocessor computer system ...

...The switching processors route received ones of the data packets to a selected one of the external networks in accordance with information included in a header portion of the data packets and the load distribution configuration data. The switching processors perform periodic polling of corresponding ones of the network interfaces to detect a received one of the data packets therein. In addition, the switching processors re-write the routing information included in the header portion of the data packets to reflect the selected one of the external networks. (see abstract)

Thus, Lin clearly does not teach or suggest the forwarder of claim 23 which checks the destination address of the packet from its network interface, being associated with an address of the virtual interface, the forwarder transmitting to the router control device the packet if the destination address is an address of forwarder itself, the forwarder forwarding the packet to its other network interface according to the first routing table, and the forwarder including a received

packet transfer unit that transmits a routing information packet received at the network interface to the router control device that maintains the first routing table using a routing process.

In summary it is submitted that none of the relied upon teaches or suggests:

the forwarder checks a destination address of the packet from its network interface, being associated with an address of the virtual interface, the forwarder transmitting to the router control device the packet if the destination address is an address of the forwarder itself, the forwarder forwarding the packet to its other network interface according to the first routing table, and the forwarder including a received packet transfer unit that transmits a routing information packet received at the network interface to the router control device that maintains the first routing table using a routing process, wherein

Therefore, it is submitted that claim 23 patentably distinguishes over the relied upon art.

#### **Claims 27 and 31**

Claims 27 and 31 both recite:

the forwarder checks a destination address of the packet received from the network interface of the forwarder, transmits to the router control device the packet if the destination address is an address of the forwarder itself, and forwards the packet based on the second routing table if the destination address is not the address of the forwarder, and

Therefore, it is submitted that claims 27 and 31 patentably distinguish over the relied upon art.

#### **Claims 21, 22, 25, 26, 29 and 30**

Claims 21, 22, 25, 26, 29 and 30 are all dependent claims which depend from one of the above independent claims and include all of the features of the independent claim from which they depend plus additional features which are not taught or suggested by the relied upon art. Therefore, it is submitted that these claims also patentably distinguish over the relied upon art.

#### **SUMMARY**

It is submitted that none of the references, either taken alone or in combination, teach the present claimed invention. Thus, claims 1-8, 10, 12, 14, 16, 18 and 20-31 are deemed to be in a condition suitable for allowance. Reconsideration of the claims and an early of Notice of Allowance are earnestly solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

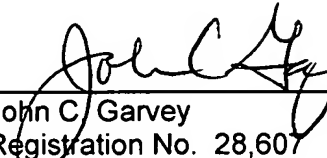
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If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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